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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,904	03/15/2001	Norihito Okada	107183-00001	2924

32294 7590 09/25/2003

SQUIRE, SANDERS & DEMPSEY L.L.P.  
14TH FLOOR  
8000 TOWERS CRESCENT  
TYSONS CORNER, VA 22182

10  
EXAMINER

LUK, EMMANUEL S

ART UNIT

PAPER NUMBER

1722

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/805,904

Applicant(s)

OKADA, NORIHITO

Examiner

Emmanuel S. Luk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-12,15-17 and 19-26 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 1-3,5-12,15-17 and 19-26 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6, 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-8, 11, 12, 15-22, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi.

Taniguchi teaches an ejector mechanism in an injection molding machine having a first drive unit (51) that provides power to drive a first transmission unit (50a), wherein the rotation of the drive unit causes rotation of the transmission unit. An ejector member (27) reciprocates upon the motion of the transmission unit, the transmission and drive units are configured where the rotation of the drive unit results in rotation and reciprocation of the transmission unit, the transmission unit acts as a motion conversion unit. A second drive unit (40) provides power to a second transmission unit (43) and

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drives the sleeve (30). The drive units are controlled by a controller (8) that signals the drive unit when to rotate one direction, to stop or to reverse the direction of the rotation. The pin and sleeve can be operated independently from another.

Taniguchi fails to teach a single motion conversion unit.

The terminology of a single motion conversion unit as understood by the specification provided by the applicants is a unit that converts rotational motion to linear motion. However, structurally the elements taught by Taniguchi matches the claimed invention and the both transmission means that converts the rotational motion from the drive units to linear motions are provided on the same structure (50), therefore it would have been obvious to one of ordinary skill in the art to recognize that the transmission units together comprise a single motion conversion unit.

4. Claims 9 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi as applied to claims 1-8, 11, 12, 15-22, 25 and 26 above, and further in view of Fujishiro et al.

Taniguchi fails to teach a spring.

Fujishiro teaches an ejector in an injection molding machine, where spring (19) acts to limit the axial movement of the transmission device (26) as it is driven by the driving unit (54). The spring acts as a biasing means that helps limit the axial movement of the transmission device and to bias the ejectors (17) out of the cavity (23).

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It would have been obvious to one of ordinary skill in the art to modify Taniguchi with a spring as taught by Fujishiro et al because it allows quick advancing and withdrawals of the ejectors into the cavity.

5. Claims 10 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi as applied to claims 1-8, 11, 12, 15-22, 25 and 26 above, and further in view of Heindl et al.

Taniguchi fails to teach brakes.

Heindl teaches an injection molding machine having a drive unit (22) that drives the rotation and reciprocation of a transmission unit (15), the transmission unit drives the reciprocation of the mobile support plate (3). Brakes (24) allows for holding the drive unit, thus holding the transmission unit in position. This in turn limits the axial movement of the transmission device.

It would have been obvious to one of ordinary skill in the art to modify Taniguchi with brakes as taught by Heindl because it allows for limiting the axial movement of the transmission unit and thus able to hold the ejector in position.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-3, 4-12, 15-17 and 19-26 have been considered but are moot in view of the new ground(s) of rejection. The applicant has amended the claims to include that the first and second transmission units together comprise a single motion conversion unit. The applicants argued that the prior art of

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record do not teach the single motion conversion unit. The applicant's specification discusses the motion conversion unit as converting rotational movement from the drive units into linear movement. The definition of the single motion conversion unit itself can be understood that the first and second transmission units are combined into a single structure, thus a single motion conversion unit. Thereby, Taniguchi teaches the first and second conversion units that are both part of the same unit.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (703) 305-1558. The examiner can normally be reached on Monday through Friday 8 to 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (703) 308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

E.L.  
August 25, 2003

  
W. L. WALKER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700